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ABSTRACT

As one of a series of surveys constituting a statewide study in Montana, this report presents findings obtained from a survey conducted to determine the state of existing farm operations relative to employment practices and to delineate manpower needs of agribusiness. An analysis of the data collected from survey instruments distributed to agricultural producers on record in the Internal Revenue Service Office as having hired personnel in 1970 revealed that: (1) General farm workers are needed on both a seasonal and full-time basis; (2) More full-time workers will be required than seasonal laborers; (3) Business expansion, increased mechanization, and the loss of family labor account for the labor shift; (4) No specific educational requirement is needed to gain employment; and (5) The pay would range from $300 to $550. Recommendations and implications are included. Components of the study are available as VT 017 462-017 465 in this issue. (SN)

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Agricultural Production Manpower Report

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AGRICULTURAL PRODUCTION MANPOWER REPORT

by

Max L. Amberson

Douglas D. Bishop

The work presented herein was performed by the Montana Agricultural Experiment Station and supported by the Office of Superintendent of Public Instruction, Division of Vocational and Occupational Skills

The Montana State University
Department of Agricultural Education
Room 313, Linfield Hall, Bozeman, Montana
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PREFACE

The staff of the Department of Agricultural Education, Spring of 1970, initiated a statewide study to determine the nature and extent of rural youth and adult educational and employment opportunities associated with agri-business and production agriculture. The Agri-Business Manpower Report was completed June 30, 1972. The Agricultural Production Manpower Report completes Phase I of this research effort.

Both the Agri-Business Manpower Report and the Agricultural Production Manpower Report were published in two parts. Accompanying each report was a procedural manual which specified in detail the research methodology employed.

This publication was prepared by Max L. Amberson, Professor of Agricultural Education, Montana State University. It is hoped that information contained within this report will provide insight for further development of agricultural education programs in Montana.

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Department of Agricultural Education
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ACKNOWLEDGMENTS

The magnitude of Agricultural Manpower Studies in Montana precludes pursuing rational solutions in isolation. Therefore, it was essential to enlist the assistance of interested individuals, agencies and organizations throughout Montana and the nation. Several agencies have made specific contributions and should be recognized specifically: The Office of the Superintendent of Public Instruction, The Montana Agricultural Stabilization and Conservation Service, The Internal Revenue Service (Ogden Office), The Office of the Governor of Montana, The Montana Cooperative Extension Service, The Montana Experiment Station, The Montana State University's Departments of Agriculture, Mathematics and Library, The Montana Crop and Livestock Reporting Service, Helena, Montana. The Montana Employment Security Commission, The United States Department of Agricultural Economic Research Service, The Office of Congressman Richard G. Shoup and the Agricultural Committee of the Montana Chamber of Commerce.

The cooperation and assistance from the personnel of these agencies greatly facilitated this study.

Mrs. Barbara Agocs, technical assistant, and Mrs. Erma Belden, secretary, were responsible for the execution of the manuscript; their continued dedication was appreciated.

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I

INTRODUCTION

Montana's farmers and ranchers received 643 million dollars, including government payments, in 1970 from the sale of agricultural products. This amount was five percent above cash receipts for 1969. Agriculture is, and no doubt will continue to be, Montana's number one income-producing industry. Because agricultural production is big and is becoming increasingly complex, it offers many opportunities for employment in a wide variety of skills.

Persons engaged in production agriculture as owners or entrepreneurs of large farming operations, or more appropriately complex businesses, are concerned about the general availability and quality of the labor input to their operations. In agriculture, as in other industries, technological advancement has created many new jobs and has completely changed the nature of those that remain. Farm and ranch workers are rapidly becoming specialists. The modern farmer and rancher relies heavily on technicians to assist him in a variety of tasks including caring for large beef, sheep and swine herds, operation of expensive, complicated equipment and making critical decisions about the many and varied products in use in modern agriculture.

One of Montana's major problems is the exodus of its youth to other states in order to seek employment. Indications are that this exodus will increase.

As an end result, the state will receive little or no direct return for an approximately 6,000 dollars investment in their elementary and high school education, to say nothing of the additional expense should they attend college.

During the past decade, many states have begun to take positive steps to gather data needed to understand the employment problems of its several industries in order to augment planning efforts. In all cases, these studies concluded that rural people, in order to succeed in jobs created by today's new agriculture, are in need of additional educational training.

Since a comprehensive analysis of current and projected agricultural manpower needs in Montana does not exist, this study has grown out of a concern for the broad field of agriculture and more specifically for the education and training of rural youths and adults in Montana.

A knowledge of the nature and extent of the present and future job opportunities in agricultural production is important to young people who want to prepare themselves for an agricultural career and, likewise, for those educational institutions charged with the responsibility of developing training programs. This study represents the first step in a long range program to identify current and existing employment opportunities in agricultural production and to identify those competencies needed by employees prior to entering employment.

RATIONALE FOR THE STUDY

Much has been written about the change in the nature of agricultural employment. In Montana, this change has been evidenced by a reduction in the number of workers who work directly on the farms and ranches and a sharp increase in the number of service-oriented jobs that require some level of competency in agriculture. At different times, attempts have been made to gather data on the Montana agri-business employment situation under varying conditions and in different geographic areas. Valuable as these efforts have been, they have not adequately projected the number and kinds of jobs in agricultural production and the related agri-businesses that will exist in the future in Montana. In short, specific facts about agricultural jobs, present and projected, on and off farms and ranches in Montana have been unknown.

The Montana Employment Service has suggested that the completion of detailed occupational projections has become a necessity. They further point out that "manpower planners have, in the past, been forced to plan manpower and vocational education programs with a minimum of reliable data on occupational needs in the future." (1) The initial step in coordinating the efforts of all agencies interested in matching potential employees and their interests with potential jobs and job competencies must be the conduct of systematic and detailed manpower studies.

Existing and future training programs at the secondary level will, in part, be effective only to the extent that Montana's educational planners are able to match the student and his interests and the job and its required

competencies with the facilities available to provide the needed training.

Similar data are needed in the refinement and development of post-secondary vocational-technical and baccalaureate degree programs designed to train prospective employees for occupations in the agricultural field. Program planners in these areas must have accurate, reliable figures on the numbers and kinds of employees needed in the various areas if they are to initiate programs to meet present and projected manpower needs.

THE PROPOSAL

In the spring of 1970, the staff of the Department of Agricultural Education proposed to initiate a statewide effort to determine the nature and extent of rural youth and adult educational and employment opportunities uniquely associated with agriculture. The proposed survey was viewed as a planned effort to gather data which would reflect a more precise picture of the educational needs and occupational opportunities available to rural youth and adults in Montana.

Separate segments of the project would revolve around the accomplishment of four major objectives:

1. To assess the nature of and extent of educational and employment opportunities for rural youth and adults engaged in or preparing to engage in agricultural or agriculturally related occupations.

2. To develop and demonstrate approved methods and procedures for developing formal and informal rural youth and adult educational programs of effective format to meet objectives derived from an analysis of the need for educational programs in agriculture in Montana.

3. To evolve guidelines for the utilization of an educational consortium to provide educational activities which would enable rural youth and adults in agricultural pursuits to acquire needed competencies.

4. To establish a design and mechanism for the dissemination, evaluation, adjustment and renewal of rural youth and adult educational programs in agriculture in Montana.

During the early stages of the planning process it became apparent that the magnitude of the objectives dictated that the project be divided into separate, but not mutually exclusive, phases. Reports of similar research conducted in California (17) and Oklahoma (10) specifically

indicated that agri-business and production agriculture should be treated as separate entities. This observation prompted the researchers to divide agri-business and production into two separate research phases. This proved to be a wise decision because of the wide variety of sources from which original data were derived, the different research techniques employed and the desirability of separate final reports.

THE AGRICULTURAL PRODUCTION RESEARCH EFFORT

Sub-objectives for the agricultural production manpower study were devised to enable the researchers to deal with specific segments of the major problem. Sub-objectives identified were as follows:

1. To involve the several affected agencies, institutions and individuals in Montana in the agricultural manpower identification process.

2. To determine certain basic data about respective agricultural producers.

3. To collect selected basic data about the agricultural producers operation.

4. To determine the number of seasonal and full-time employees currently employed in agricultural production in Montana and the number of projected positions three years hence.

5. To ascertain the employee benefits provided by agricultural producers.

6. To determine the job titles in which full-time and seasonal vacancies currently exist among agricultural producers.

7. To determine the nature of employment provided by agricultural producers as it relates to hours per week, months per year, educational requirements, value of salary, meals, housing, etc.

8. To determine the reasons for the difficulty in obtaining and holding employees in certain job titles over the last few years.

ASSUMPTIONS

The assumptions accepted by the researchers at the beginning of the study were as follows: (1) that agricultural producers would be interested in the potential outcome of the study and would respond to a mail questionnaire, and (2) that they would be able to identify job titles for seasonal and full-time employees by the major activities or groups of activities which employees perform on their respective farms or ranches.

LIMITATIONS

The researcher accepted as the total population, those Montana agricultural producers whose names were identified through the Internal Revenue Service as having hired agricultural employees in 1971.

DEFINITION OF TERM

To insure a common understanding among participants regarding the many and varied meanings of the term agricultural production, the following definition was accepted:

> Agricultural production includes those activities associated with the principles and processes involved in the planning related to and the economic use of facilities, land, machinery, chemicals, finance and labor. These components are involved primarily in the production of plant and animal products. Agricultural production also includes, to varying degrees, the preparation of these products on farms or ranches for man's use and their disposal by marketing.

REVIEW OF RESEARCH AND RELATED LITERATURE

Modern farms in the United States are less labor-intensive and more heavily dependent upon mechanization. Large self-propelled harvesters and large planting and cultivation equipment have reduced the farm labor input considerably. Labor-saving machines and other capital inputs have been increasingly substituted for hired farm workers during the last three decades. Intensive use of large, expensive equipment has increased the need for efficient and timely use of all resources, including labor. Livestock units which traditionally have been dependent upon family labor are increasing in size. However, "Labor-saving devices probably cannot offset both the increased demand for meat and the labor needed because the operator and his family cannot perform all jobs on the large farms." (2, p.2)

In a sense, the most important farm input is hired farm labor, particularly on large farms. "Although expenditures for hired farm labor now constitute only about eight percent of total operating expenses, hired farm workers are of major importance for other inputs." (3, p.3) They apply fertilizer and seeds, operate equipment for tillage and cultivation and harvest the final product.

Labor Hiring Variables

The size of the agriculture work force, present and future, is the major focus of this study and is affected by several variables, the most important being the size and type of the farm operation and the technology used by agricultural producers. The effect of these variables is further complicated by the fact that the farm labor force is unevenly distributed by type and size of operation and the use of regular and seasonal labor. (2, p.5)

One of the most important problems facing the farmer is that of obtaining a sufficient supply of farm labor when he needs it. The seasonal nature of farming makes this an annually-recurring problem. Even with mechanization and available family labor, most farmers still need to hire some help. (6, p.1) The number of farmers hiring labor varies from 58% of all livestock farmers to 63% for all cash grain farms. Nearly two-thirds of all farms that hire labor use seasonal labor. Therefore, recruitment of labor for a short term is of major importance to these farmers.

Hiring seasonal workers presents a problem for farm operators since they have much uncertainty about when and how many to hire. This is particularly true for farm operators in highly specialized operations with short seasonal demands for labor. The problem has become accentuated in recent years because of the shortage of persons seeking seasonal employment. Many farm operators may be forced to further mechanize their operations, provide added incentives for attracting and holding capable seasonal workers or diversify their farm operations so that fewer workers will be needed.

Salaries and Perquisites Received by Agricultural Workers

Production agriculture employees' wages are determined by economic forces shaping supply and demand for the resulting products. Efforts have been made through governmental policy to improve the wages of agricultural employees, specifically, the passage of the Federal Fair Labor Standards Act (Federal Wage-Hour Law) of 1966 with recent changes. (3) On July 1, 1971 the Minimum Wage Law and Regulations were put into effect in Montana. (4) The minimum-wage floor has made wage rates rise on farms because of a tight labor market. As a result of labor legislation and inflationary

pressures, all agricultural production workers throughout the United States received a 30 cent an hour increase in the average annual composite wage rate from 1966 to 1969. (2, p.15) Nationally, the rates were $1.03 for 1966 and $1.33 for 1969.

These forces continue to push the wage rates upward. (5) In the future, greater efforts will be made to unionize more farm workers. These several forces, combined with continued inflation and increased competition for competent farm workers, will boost wage rates of agricultural workers. (2, p. 16).

Until recently, America's hired farm work force was not included in most legislation pertaining to workers, but the situation is changing. Legislation providing Federal minimum wages to some farm workers became effective in early 1967. Legislation that would provide workmen's compensation, unemployment insurance and collective bargaining rights to farm workers is being considered for a broad segment of agricultural workers.

The economic position of farm workers cannot be fully comprehended by a mere examination of average salaries received. It is necessary to examine salaries received by employees on different types of farms--and also to examine the value and types of perquisites provided workers as well. More than 80% of the agricultural workers employed in the U.S.D.A. Economic Research Service Mountain Region, which includes Montana, received part of their remuneration as perquisites:

> On farms with less than $20,000 and more than $10,000 in gross sales, average cash wage payments of workers receiving perquisites were larger than for those workers not receiving perquisites. However, differences in cash wages between workers receiving and those not receiving perquisites were generally small. Workers, whether receiving or not receiving perquisites, employed on farms with sales below $20,000 received less than $2,000 in cash wages. But, the average cash wage increased at each successively higher sales class to a high of around $3,700 for both those receiving and not receiving perquisites on farms with sales of $100,000 or more.

> The proportion of total wages received as perquisites declined as farm size increased up to $99,999 in sales. On farms having $100,000 or more of sales, the proportion of wages as perquisites again generally increased. Exceptions were payments to workers on dairy, vegetable and general farms. (7, p.5)

Perquisites by Type and Value

Five types of perquisites are delineated by the Economic Research Service of the U.S.D.A. The proportion of workers receiving a particular type of perquisite, the cash value of such and other information are summarized as follows:

Nearly half of the workers from all farms surveyed were furnished a house. Of those receiving perquisites, about 62% were furnished a house. Three-fourths of those furnished a house also received other perquisites. About 13% were furnished room and board, another 12% did not receive room, board or a house, but received "other perquisites." Four percent of the workers received "meals only."

Workers furnished houses worked the greatest number of hours. Workers on dairy and other livestock farms generally were provided housing. By furnishing housing, the operators can locate workers with less difficulty than if they resided elsewhere.

For time spent at work, the value of perquisites ranged from $0.23 per hour for those receiving "housing only" or "meals only" to $0.93 per hour for those receiving "any other perquisite."

Workers receiving "any other perquisite" earned considerably higher average total wages than workers furnished other perquisites. Yet, workers receiving housing only or a house and other perquisites had considerably higher total wages than those receiving room and board or meals only.

Wage differences of workers furnished different types of perquisites may be the result of differences in: (1) average productivity and skill of workers; (2) bargaining ability of workers; (3) valuation of perquisites by both farm operators and workers; (4) type of farm and region where located; and (5) size of farm business.

Workers receiving room and board and "any other perquisite" received a large percentage of their wages in the form of perquisites. The average value of room and board in 1966 was 1,150 dollars, while that of "any other perquisites" was 2,167 dollars. These constituted 43% and 40% of total wages, respectively. The average equivalent rental value of a house was 572 dollars, 15% of total wages. When other perquisites were furnished together with a

house, the average value of perquisites rose 318 dollars, but total wages were lower. The value of meals averaged 401 dollars for the year on all farms but the proportion that perquisites were of wages was even greater than that of workers furnished housing only.

Length of Work Week

Sellers (8, p.1) suggested that even though much has been said about the virtues of farming as an occupation and way of life, millions have left farming for other occupations. A common complaint among both farmers and hired workers is the unusually long work week in farming. His research dealt with seasonal rather than full-time employees and was such that no pertinent generalizations could be drawn regarding the specific length of work week performed by seasonal employees.

It would have been extremely helpful to have located specific hourly data for full-time and seasonal agricultural employees, however, the researcher could find none. From that standpoint, the research being conducted herein is particularly appropriate to establishing a meaningful base for the state of Montana.

MONTANA RESEARCH UNDERWAY

Research of a longitudinal nature dealing with agricultural employment is underway in Montana within the Research Division of the Montana Employment Security Commission. Data will provide a monthly estimate of the total employment for each industry in Montana. An estimate of agricultural employment in the three following categories is included in the Employment Security Monthly Newsletter: (1) self-employed agricultural workers, (2) unpaid family labor, and (3) wage and salary agricultural workers.

These employment figures are based on previous census data and projected statistically from current survey data provided by the Montana Crop and Livestock Reporting Service, U.S.D.A., Helena, Montana.

The Montana Crop and Livestock Reporting Service, Helena, Montana, conducts agricultural manpower research on a continuous basis among Montana agricultural producers. They report changes in seasonal and full-time employees throughout the year from previously established base periods. Their sample of the Montana population is impersonal, relatively small (approximately 2%) and cannot be correlated with personal data about particular agricultural producers, which was available to the researchers through the Agricultural Stabilization and Conservation Service.

II

DESCRIPTION OF DATA

Every effort will be made to present a description of the data in as brief and interesting a way as possible with the aim of presenting findings which the researcher feels will be useful to program planners faced with the problem of revamping established programs and organizing new programs to train employees for their roles in agricultural production.

Data were obtained from Montana Agricultural Producers through survey instruments. These data were then summarized in tabular form to facilitate presentation and increase understanding. A narrative of each table has been presented.

The first section contains a description of data essential to understanding certain characteristics of the responding agricultural producers who hire employees and, specifically, certain characteristics associated with employment of agricultural workers, both current and predicted. The second section deals more specifically with current and projected manpower information.

Characteristics of Agricultural Producers Hiring Employees

Each agricultural producer was asked to designate the major enterprises on his farm or ranch. These related data would allow for in-depth analysis with specific manpower information in Phase II of this research study. Survey instruments were mailed to 4,161 Montana agricultural producers - 1,495 or 35.93% responded to the instrument. Although 1,495 persons returned questionnaires, not all tables include data from 1,495 respondents. Every respondent did not provide data to each question posed by the researcher. The tables included herein are constructed on the basis of the number of persons responding to each individual question.

TABLE 1

MAJOR ENTERPRISES OF MONTANA FARMS HIRING AGRICULTURAL WORKERS

N=1495

Enterprises	Number	Percent*
Livestock	358	23.9
Small Grain	315	21.1
Combination	787	52.6
Other	35	2.3
Total	1495	99.9

* Rounded to nearest tenth

Data shown in Table 1 indicate that 787 or 52.6% of the respondents operated combination farms with small grains, cattle or other combinations constituting their major enterprises. Three hundred fifty-eight or 23.9% of the respondents indicated that livestock was their major enterprise, 315 or 21.1% reported that their major enterprise was crops, while 35 or 2.3% reported other enterprises.

Since the average size of all Montana farms in 1970 averaged slightly over 2,600 acres, one would assume that the bulk of the respondents would report farms in this size category. Table 2 contains more specific data.

TABLE 2

MONTANA FARMS HIRING AGRICULTURAL WORKERS BY FARM SIZE

N=1495

Farm Size (Acres)	Number	Percent*
0-50	10	0.7
51-100	15	1.0
101-300	121	8.1
301-500	107	7.2
501-1000	183	12.4
1001-2000	358	23.9
2001-4000	363	24.3
4001-6000	100	6.7
6001-10,000	138	9.2
10,000 and over	100	6.7
Total	1495	100.0

* Rounded to nearest tenth

Three hundred fifty-eight or 23.9% of the respondents indicated their farm contained 1001-2000 acres, and 363 or 24.3% reported acreages between 2001-4000 acres. The cumulative total of farms reporting acreage over 2000 acres amounted to 46.9% of the farms and ranches represented in the sample.

The gross sales from Montana farms is another way of measuring size of business operation. The distribution of Montana agricultural producers by their 1971 gross farm sales appears in Table 3.

TABLE 3

GROSS FARM SALES OF MONTANA AGRICULTURAL PRODUCERS WHO HIRE AGRICULTURAL WORKERS

N=1472

Gross Farm Sales (Dollars)	Number	Percent*
Less than 10,000	82	5.6
10 - 19,999	247	16.8
20 - 39,999	525	35.6
40 - 69,999	335	22.8
70 - 99,999	132	9.0
100 - 149,999	87	5.9
150 - 199,999	23	1.6
200 - 499,999	36	2.4
More than 500,000	5	0.3
Total	1472	100.0

* Rounded to nearest tenth

Gross farm sales of between 20 - 39,999 dollars were received by 525 or 35.6% of the 1,472 agricultural producers responding, and 335 or 22.8% had gross farm sales of between 40 - 69,999 dollars.

As the literature indicated, employment is affected by the type of farm ownership; Table 4 presents data relative to type of ownership.

TABLE 4

MONTANA AGRICULTURAL PRODUCERS HIRING
EMPLOYEES BY TYPE OF OWNERSHIP

N=1491

Type of Ownership	Number	Percent*
Owner-Operator	550	36.9
Operator	789	52.9
Joint Operator	21	1.4
Corporation	40	2.7
Partner	37	2.5
Joint Owner-Operator	9	0.6
Owner	20	1.3
Owner-Operator Corporation	24	1.6
Owner-Operator Partner	1	0.0
Total	1491	100.0

* Rounded to nearest tenth

Figures in Table 4 show that 789 or 52.9% of the farmers hiring employees, were run by an operator, and 550 or 36.9% were run by the owner-operator. Though one hears frequently about the growth of the corporate farm, these data point out that only 40 or 2.7% of the Montana farms reporting were owned by corporations.

The educational achievement of Montana's agricultural producers is presented in Table 5, page 20.

TABLE 5

EDUCATIONAL ATTAINMENT OF MONTANA
AGRICULTURAL PRODUCERS WHO HIRE AGRICULTURAL WORKERS

N=1478

Level of Education	Number	Percent*
Less than 12 years	430	29.1
High School Diploma	752	50.9
2 Years Vocational School	77	5.2
College Degree	219	14.8
Total	1478	100.0

* Rounded to nearest tenth

These data indicate that 752 or 50.9% of the respondents have received a high school diploma, 430 or 29.1% have completed less than 12 years of formal schooling and 219 or 14.8% have earned a college degree.

The data presented in Table 6 provide information about the age distribution of Montana's agricultural producers as it relates to the use of hired labor.

Additional alternatives on the questionnaire would have provided an opportunity for 17 non-respondents to reply to the question related to educational attainment.

TABLE 6

AGE OF MONTANA AGRICULTURAL PRODUCERS
WHO HIRE AGRICULTURAL WORKERS

N=1491

Age in Years	Number	Percent*
Less than 20	3	0.2
20 - 29	41	2.7
30 - 39	224	15.0
40 - 49	436	29.2
50 - 59	548	36.8
60 - 69	208	14.0
70 - 79	27	1.8
Over 80	4	0.3
Total	1491	100.0

* Rounded to nearest tenth

Of the 1,491 agricultural producers responding, 548 or 36.8% were between 50 - 59 years of age; 436 or 29.2% were between 40 - 49 years of age; 224 or 15% were between 30 - 39 years of age; and 208 or 14% were between 60 - 69 years of age. Further analysis would be needed to determine the degree to which age was associated with the incidence of hiring agricultural employees.

The data presented in Table 7 array the responses from 1,410 agricultural producers into one of four categories relating to their intent regarding retirement.

TABLE 7

YEARS TO RETIREMENT AS INDICATED BY
MONTANA AGRICULTURAL PRODUCERS

N=1410

Years to Retirement	Number	Percent*
5 Years	207	14.7
10 Years	345	24.4
25 Years	382	27.1
More Than 25 Years	476	33.8
Total	1410	100.0

* Rounded to nearest tenth

Figures in Table 7 indicate that of the agricultural producers who hire agricultural employees, 207 or 14.7% intend to retire within the next five years, and 476 or 33.8% plan to work an additional 25 or more years.

Not all the benefits provided employees by agricultural producers are in the form of salaries. Agricultural producers were asked to identify one or more employee benefits they provide, and their responses are tabulated in Table 8.

Eighty-five persons did not respond to this question indicating there were insufficient alternatives to which they could respond.

TABLE 8

EMPLOYEE BENEFITS PROVIDED EMPLOYEES BY
MONTANA AGRICULTURAL PRODUCERS

N=2363

Employee Benefits	Number	Percent*
No Benefits	423	17.9
Liability Insurance	795	33.6
Workmen's Compensation	114	4.8
Social Security	900	38.1
Other	131	5.5
Total	2363	99.9

* Rounded to nearest tenth

Care should be exercised in interpreting the figures in Table 8. As indicated, 2,363 responded to this question while only 1,495 agricultural producers returned survey instruments. This suggests that employers provide more than one employee benefit.

The data in Table 8 indicate that 900 of 2,363 or 38.1% of the responses indicated provided social security; 795 or 33.6% of the responses provided liability insurance; 114 or 4.8% provided workmen's compensation; while 423 or 17.9% of the responses indicated provided no employee benefits.

When computed on the basis of the maximum number of different agricultural producers returning the questionnaire, data would indicate that

900 or 60.2% of the 1,495 agricultural producers provided social security; 795 or 53.2% provided liability insurance; 114 or 7.6% provided workmen's compensation; 131 or 8.8% provided other employee benefits while 423 or 28.3% provided no employee benefits.

Table 9 was prepared to show the extent to which seasonal employees were employed by agricultural producers in Montana during 1971. There is some question as to whether special training programs could be developed to prepare students for seasonal jobs. However, it may be an important way of providing cooperative experience programs for students preparing for full-time employment.

TABLE 9

MONTANA AGRICULTURAL PRODUCERS HIRING SEASONAL EMPLOYEES

N=969

Number of Seasonal Employees	Number	Percent*
1	394	40.7
2	229	23.7
3	100	10.3
4	74	7.6
5	39	4.0
6	31	3.2
7	17	1.8
8	15	1.5
9	10	1.0
10 - 19	42	4.3
20 - 29	9	0.9
30 - 39	6	0.6
40 - 49	0	0.0
Over 50	3	0.3
Total	969	99.9

* Rounded to nearest tenth

Of the 1,495 agricultural producers responding to the survey, 969 or 64.8% of these producers indicated that they hired seasonal employees. These data agree with the national statistics which show that nearly two-thirds of all farms that hire labor hire seasonal labor. One seasonal employee was hired by 394 or 40.7% of the respondents; two employees were hired by 229 or 23.7%; three employees were employed by 100 or 10.3%; four employees were hired by 7.6% of the agricultural producers; while 42 or 4.3% hired from 10 - 19 employees per year.

Data relating to the hiring of full-time agricultural employees are the major concern of this study since agricultural programs to train persons for full-time employment currently exist in the public secondary schools, area vocational-technical centers, community colleges and within Montana's institutions of higher education. These data may prove valuable to persons now conducting educational programs, those desiring to change their programs and especially to those persons or institutions desiring to establish new programs which this study may imply should be established. The figures in Table 10 show the number of agricultural producers responding who hired full-time agricultural employees during 1971.

TABLE 10

MONTANA AGRICULTURAL PRODUCERS HIRING FULL-TIME EMPLOYEES

N=444

Number of Full-Time Employees	Number	Percent*
1	283	63.7
2	77	17.3
3	28	6.3
4	17	3.8
5	12	2.7
6	12	2.7
7	2	0.5
8	2	0.5
9	2	0.5
10 - 19	8	1.8
20 - 29	0	0.0
30 - 39	1	0.2
40 - 49	0	0.0
Over 50	0	0.0
Total	444	100.0

* Rounded to nearest tenth

In total, 1,495 persons responded to the questionnaire. Of the 1,495 respondents, 444 or 29.7% reported hiring full-time employees; 283 or 63.7% hired one full-time employee; 77 or 17.3% hired two employees; and 28 or 6.3% hired three full-time employees.

Job Titles of Seasonal Employees

The Dictionary of Occupational Titles (D.O.T.), Standard Industrial Classification (S.I.C.), or the U.S.O.E. codes and titles did not provide the researcher with a prepared job title taxonomy which could be used in this study. In lieu of such a taxonomy to which agricultural producers might assign persons who they were employing at the time of the survey, each producer was asked to designate the job title which he used to classify a particular employee. By leaving the designation open to the producer it was believed that the producer would designate a job title which would be appropriate in light of the tasks which their respective employee most frequently performed.

Upon receipt of the survey instruments it was necessary for the researcher to devise a job title taxonomy into which information provided by producers could be categorized and subsequently coded for machine processing and for presentation in this study. The researcher arbitrarily assigned job titles such as general farm worker, farm machinery operator, farm and ranch foreman, etc. In many cases, agricultural producers indicated a job title and then went on to specify a job sub-title. Job sub-titles provided the researcher, appear in all tables dealing with job titles. The taxonomy used by the researcher appears in Table II. From the data provided, the researcher assigned job titles and job sub-titles where agricultural producers provided data adequate to make a job sub-title. An example of a job title is general farm worker. Within this job title, producers indicated there were fourteen specifically designated sub-titles ranging from combination livestock and crops through general

farm workers who worked primarily with livestock or crops. The same situation as described above existed within the job title farm and ranch foreman.

The competency study to be conducted during Phase II of this research will attempt to verify if sub-titles exist as described by the researcher.

It should be noted that all job titles identified appear in each of the tables through the balance of the study where job titles are discussed even though there were not employees reported in each job title in every table.

TABLE 11

JOB TITLES OF SEASONAL EMPLOYEES
HIRED BY MONTANA AGRICULTURAL PRODUCERS (1971)

N=3170

Job Titles	Number	Percent*
General Farm Worker	65	2.0
Combination Livestock and Crops	526	16.5
Livestock	403	12.7
Sheep	89	2.8
Beef	24	0.8
Poultry	0	0.0
Dairy	8	0.3
Hogs	3	0.1
Field Crops	41	1.3
Hay	519	16.3
Grain	112	3.5
Sugar Beets	250	7.9
Vegetables	0	0.0
Fruit Trees	70	2.2
Potatoes	238	7.5
Farm Machinery Operator	378	11.9
Agricultural Mechanic	14	0.4
Irrigator	138	4.4
Farm and Ranch Foreman	1	0.0
Livestock	2	0.1
Crops	5	0.2
Unspecified	0	0.0
Combination Livestock and Crops	12	0.4
Artificial Inseminator	15	0.5
Herdsman	9	0.3
Milker	5	0.2
Sheep Herder	6	0.2
Apiarist	1	0.0
Cowboy	13	0.4
Truck Driver	190	6.0
Farm and Ranch Cook	5	0.2
General Household Assistant	14	0.4
Forestry	2	0.1
Horticultural	12	0.4
Total	3170	100.0

* Rounded to nearest tenth

Montana agricultural producers responding to the study (1,495) reported hiring 3,170 seasonal employees during 1971.

The broad category of "general farm worker" included the bulk of seasonal employees hired by Montana's agricultural producers. Specifically, 526 or 16.5% of the seasonal employees were classified in the combination livestock and crop job titles, and 519 or 16.3% occupied the general farm worker (hay) job title. Following, in order of importance, were the job title classifications: general farm worker (livestock) involving 403 or 12.7%; farm machinery operators, 378 or 11.9%; general farm worker, (sugar beet), 250 or 7.9%; and general farm worker (grain), 112 or 3.5% of the seasonal employees. One hundred thirty-eight or 4.4% of the seasonal employees were classified as irrigators. As job competencies are isolated for the above mentioned job titles, a meaningful and perhaps standardized taxonomy specifically adapted to Montana agricultural employees may evolve.

The process of projecting needed agricultural employees for some future date is extremely difficult due to agricultural policy changes, economic considerations, climate and the many personal management considerations of Montana's agricultural producers. Agricultural producers were asked to predict their employment needs to determine the extent of the seasonal work force in agriculture for 1974. These data appear in Table 12.

TABLE 12

JOB TITLES OF SEASONAL EMPLOYEES WHICH MONTANA AGRICULTURAL PRODUCERS ANTICIPATE HIRING IN 1974

N=2777

Job Titles	Number	Percent*
General Farm Worker	57	2.1
Combination Livestock and Crops	461	16.6
Livestock	348	12.5
Sheep	80	2.9
Beef	25	0.9
Poultry	0	0.0
Dairy	5	0.2
Hogs	0	0.0
Field Crops	35	1.3
Hay	448	16.1
Grain	106	3.8
Sugar Beets	188	6.8
Vegetables	0	0.0
Fruit Trees	70	2.5
Potatoes	216	7.8
Farm Machinery Operator	327	11.8
Agricultural Mechanic	16	0.6
Irrigator	134	4.8
Farm and Ranch Foreman	1	0.0
Livestock	2	0.1
Crops	5	0.2
Unspecified	0	0.0
Combination Livestock and Crops	1	0.0
Artificial Inseminator	12	0.4
Herdsman	9	0.3
Milker	4	0.1
Sheep Herder	5	0.2
Apiarist	1	0.0
Cowboy	14	0.5
Truck Driver	179	6.4
Farm and Ranch Cook	3	0.1
General Household Assistant	12	0.4
Forestry	1	0.0
Horticulture	12	0.4
Total	2777	99.8

* Rounded to nearest tenth

In 1971, producers hired 3,170 seasonal employees and in 1974, they plan to hire 2,777. Thus, Montana agricultural producers indicate that in 1974 they will hire 393 or 12.4% fewer seasonal agricultural employees than they hired in 1971.

The general farm, combination livestock and crops employee, led the seasonal labor predictions with 461 or 16.6% of the predicted agricultural work force, followed by general farm worker (hay), 448 or 16.1%; and 348 general farm workers (livestock) which represented 12.5% of the seasonal agricultural employment. Producers predicted they would need 327 farm machinery operators which would account for 11.8% of the seasonal employees whom agricultural producers plan to hire in 1974.

Reasons for Seasonal Employee Change

Reasons given by Montana agricultural producers for changes in hiring seasonal agricultural employees in 1974 appear in Table 13.

TABLE 13

REASONS GIVEN BY MONTANA AGRICULTURAL PRODUCERS
FOR CHANGES IN NUMBERS OF SEASONAL EMPLOYEES 1971-1974

N=238

Reasons for Employee Change	Number	Percent*
Business Expansion	59	24.8
Normal Turnover	5	2.1
Retirement	15	6.3
Loss of Family Labor	10	4.2
Employee Not Trained	1	0.4
Cannot Compete With Welfare	3	1.3
Unsatisfactory Personnel	11	4.6
Salary Scale	3	1.3
Labor Laws	1	0.4
Geographic Isolation	0	0.0
Low Status of Job	1	0.4
Employee Unwilling to Work	1	0.4
Housing Inadequate	0	0.0
Inadequate Fringe Benefits	0	0.0
Employee Not Available	2	0.8
Additional Family Labor	45	18.9
Business Reduction	30	12.6
Selling or Sold Operation	2	0.8
Increased Mechanization	49	20.6
Total	238	99.9

* Rounded to nearest tenth

Change of seasonal employment were categorized by the researcher into nineteen reasons categories. Fifty-nine or 24.8% of the agricultural producers indicated that business expansion was the reason for the predicted change in seasonal employees from 1971 to 1974. Forty-nine or 20.6% of the producers indicated that their reason for seasonal employee changes was that they planned to make more use of machinery, 45 or 18.9% of the producers indicated that added family labor was their reason for change, while 30 or 12.6% indicated

that business reduction was the reason for their anticipated change in seasonal agricultural employees from 1971 to 1974. Other reasons mentioned were retirement, unsatisfactory personnel and loss of family labor.

A major problem associated with hiring seasonal employees is the time of year in which employees are in demand. The months that Montana agricultural producers employed seasonal employees in 1971 are shown in Table 14.

TABLE 14

MONTHS WHICH MONTANA AGRICULTURAL EMPLOYERS HIRED SEASONAL EMPLOYEES (1971)

N=4789

Months	Number	Percent*
January	81	1.7
February	113	2.4
March	210	4.4
April	412	8.6
May	535	11.2
June	759	15.8
July	891	18.6
August	899	18.8
September	515	10.7
October	221	4.6
November	90	1.9
December	63	1.3

* Rounded to nearest tenth

Montana's agricultural producers reported that June, July and August were the months in which they hired the greatest numbers of seasonal employees. August was the leading month in which 899 or 18.8% of the agricultural producers hired the greatest number of seasonal employees. August was followed by July with 891 or 18.6% and June with 759 or 15.8% of the employers hiring

employees, while in May and September there were fewer seasonal employees hired. These months accounted for 11.2% and 10.7%, respectfully, of the total months of employment in which seasonal employees were hired by Montana's agricultural producers.

Monthly salaries paid to seasonal agricultural employees as paid by Montana's agricultural producers appear in Table 15.

TABLE 15

MONTHLY AVERAGE SALARY PROVIDED SEASONAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=950

Monthly Average Salary Range (Dollars)	Number	Percent*
Less than 100	13	1.4
100 - 149	12	1.3
150 - 199	41	4.3
200 - 249	59	6.2
250 - 299	116	12.2
300 - 349	249	26.2
350 - 399	131	13.8
400 - 449	108	11.4
450 - 499	73	7.7
500 - 549	41	4.3
550 - 599	8	0.8
600 - 649	40	4.2
650 - 699	9	0.9
700 - 749	7	0.7
750 - 799	27	2.8
800 - 849	4	0.4
850 - 899	0	0.0
900 - 949	7	0.7
950 - 999	0	0.0
Over 1000	5	0.5
Total	950	99.8

* Rounded to nearest tenth

A breakdown of the salaries paid by agricultural producers, presented in Table 15, show that 249 or 26.2% of the employers paid an average monthly salary ranging from 300 to 349 dollars per month, 116 or 12.2% paid between 250-299 dollars per month and 108 or 11.4% paid between 400-449 dollars per month. Thirteen employees received less than 100 dollars per month and five received over 1,000 dollars per month.

Salaries were not the only remuneration received by agricultural employees. In some instances, seasonal employees were provided housing. Figures in Table 16 indicate the value agricultural producers assigned to housing if it was provided seasonal employees.

TABLE 16

MONTHLY VALUE OF HOUSING PROVIDED SEASONAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=507

Value of Housing (Dollars)	Number	Percent*
30 - 39	97	19.1
40 - 49	42	8.3
50 - 59	130	25.6
60 - 69	98	19.3
70 - 79	36	7.1
80 - 89	2	0.4
90 - 99	25	4.9
100 - 109	38	7.5
110 - 119	0	0.0
120 - 129	7	1.4
130 - 139	32	6.3
Total	507	99.9

* Rounded to nearest tenth

Of the 507 agricultural producers who assigned a value to the housing provided seasonal employees, 130 or 25.6% assigned a monthly value ranging from 50 to 59 dollars per month; 30 to 39 dollars was the value assigned by 97 or 19.1%; and 60 to 69 dollars per month was the value assigned by 98 or 19.3% of the agricultural producers.

Agricultural producers provided additional remuneration to seasonal employees by providing meals. These data are presented in Table 17.

TABLE 17

MONTHLY VALUE OF MEALS PROVIDED SEASONAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=908

Monthly Value of Meals (Dollars)	Number	Percent*
Less than 19	4	0.4
20 - 29	7	0.8
30 - 39	7	0.8
40 - 49	52	5.7
50 - 59	66	7.3
60 - 69	84	9.3
70 - 79	67	7.4
80 - 89	18	2.0
90 - 99	177	19.4
Over 100	426	46.9
Total	908	100.0

* Rounded to nearest tenth

Forty-six and nine-tenths percent or 426 of the producers indicated that meals furnished by the producers were valued at over 100 dollars per month, 177 or 19.4% at between 90 - 99 dollars and 84 or 9.3% between 60 - 69 dollars.

The total value of all employee benefits included in Tables 15, 16, and 17 was compiled and the results are presented in Table 18. This table

combines the remuneration which seasonal employees derived from salaries, housing and meals, and the aggregate value was computed on a monthly basis.

TABLE 18

TOTAL MONTHLY REMUNERATION PROVIDED SEASONAL AGRICULTURAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=1349

Total Remuneration (Dollars)	Number	Percent*
Less than 100	125	9.3
100 - 149	14	1.0
150 - 199	31	2.3
200 - 249	24	1.8
250 - 299	49	3.6
300 - 349	82	6.1
350 - 399	150	11.1
400 - 449	207	15.3
450 - 499	220	16.2
500 - 549	152	11.3
550 - 599	72	5.3
600 - 649	68	5.0
650 - 699	31	2.3
700 - 749	19	1.4
750 - 799	35	2.6
800 - 849	16	1.2
850 - 899	9	0.7
900 - 949	16	1.2
950 - 999	9	0.7
Over 1000	20	1.5
Total	1349	99.9

* Rounded to nearest tenth

Two hundred twenty or 16.2% of the agricultural producers provided remunerations to their seasonal employees between 450 - 499 dollars per month; 207 or 15.3% provided between 400 - 449 dollars per month; 152 or 11.3% provided between 500 - 549 dollars per month, while 150 or 11.1% provided between 350 - 399 dollars to compensate seasonal employees.

A question was included on the survey instrument to determine what Montana's agricultural producers required in the way of educational level for seasonal employment. A summary of these data appear in Table 19.

TABLE 19

EDUCATIONAL LEVEL REQUIRED OF SEASONAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=988

Educational Level	Number	Percent*
No Requirement	687	69.6
8th Grade	109	11.0
High School	178	18.0
2 Year Vocational School	12	1.2
College Degree	2	0.2
Total	988	100.0

* Rounded to nearest tenth

Of the 988 agricultural producers responding, 687 or 69.6% indicated that they had no required educational level for seasonal employees; 178 or 18% of the agricultural producers wanted their seasonal employees to have completed high school; and 109 or 11% indicated that an 8th grade education was required. The small response to this question may have been due to the fact that not enough educational level alternatives were provided the respondents on this question.

To determine the extent to which seasonal employees were employed in 1971, agricultural producers were asked to report the average number of hours each seasonal employee worked per week in their respective jobs. These data appear in Table 20.

TABLE 20

AVERAGE NUMBER OF HOURS PER WEEK AGRICULTURAL PRODUCERS EMPLOYED SEASONAL EMPLOYEES (1971)

N=982

Hours	Number	Percent*
1 - 13	42	4.3
14 - 26	54	5.5
27 - 39	49	5.0
40 - 44	136	13.8
45 - 49	182	18.5
50 - 54	171	17.4
55 - 59	133	13.5
Over 60	215	21.9
Total	982	99.9

* Rounded to nearest tenth

Of the 982 agricultural producers responding, 215 or 21.9% indicated their seasonal employees spent over 60 hours per week on the job; 182 or 18.5% spent 45 - 49 hours; 171 or 17.4% employed their seasonal employees an average of over 50 - 54 hours per week; 136 or 13.8% worked their employees over 40 - 44 hours, while 133 or 13.5% worked their employees between 55 - 59 hours per week.

Full-Time Employees Hired by Montana Agricultural Producers

Identifying job titles of full-time agricultural employees was an essential first step in this research effort. Broad general job title groupings used in this study will be further refined in Phase II through personal interviews with selected agricultural producers. Table 21 presents job titles of full-time agricultural employees hired by Montana agricultural producers in 1971.

TABLE 21

JOB TITLES OF FULL-TIME AGRICULTURAL EMPLOYEES
HIRED BY MONTANA AGRICULTURAL PRODUCERS (1971)

N=811

Job Titles	Number	Percent*
General Farm Worker	12	1.5
Combination Livestock and Crop	246	30.3
Livestock (General)	213	26.3
Sheep	4	0.5
Beef	14	1.7
Poultry	1	0.1
Dairy	4	0.5
Hogs	3	0.4
Field Crops (General)	3	0.4
Hay	5	0.6
Grain	16	2.0
Sugar Beets	0	0.0
Vegetables	0	0.0
Fruit Trees	0	0.0
Potatoes	2	0.2
Farm Machinery Operator	20	2.5
Agricultural Mechanic	14	1.7
Irrigation	9	1.1
Farm and Ranch Foreman	15	1.8
Livestock	59	7.3
Crops	20	2.5
Unspecified	14	1.7
Combination Livestock and Crops	42	5.2
Artificial Inseminator	0	0.0
Herdsman	29	3.6
Milker	9	1.1
Sheep Herder	11	1.4
Apiarist	0	0.0
Cowboy	21	2.6
Truck Driver	6	0.7
Farm and Ranch Cook	5	0.6
General Household Assistant	14	1.7
Forestry	0	0.0
Horticulture	0	0.0
Total	811	100.0

* Rounded to nearest tenth

Job titles for full-time agricultural employees were reported by 811 Montana agricultural producers. As reported in Table 22, general farm worker, combination livestock and crops, was the largest category reported with 246 or 30.3% of the producers hiring employees with this job title; 213 or 26.3% reported hiring general farm workers, livestock; and 59 or 7.3% of the agricultural producers reported hiring farm and ranch foreman in the livestock job title.

Montana agricultural producers anticipate hiring more full-time agricultural employees in 1974 than in 1971 as indicated by the job titles in which producers predict hiring agricultural employees in 1974.

TABLE 22

JOB TITLES OF FULL-TIME AGRICULTURAL EMPLOYEES MONTANA AGRICULTURAL PRODUCERS PROJECT HIRING BY 1974

N=866

Job Titles	Number	Percent*
General Farm Worker	13	1.5
Combination Livestock and Crop	260	30.0
Livestock (General)	251	29.0
Sheep	4	0.5
Beef	14	1.6
Poultry	0	0.0
Dairy	4	0.5
Hogs	4	0.5
Field Crops (General)	3	0.3
Hay	4	0.5
Grain	14	1.6
Sugar Beets	0	0.0
Vegetables	0	0.0
Fruit Trees	0	0.0
Potatoes	2	0.2
Farm Machinery Operator	26	3.0
Agricultural Mechanic	14	1.6
Irrigation	11	1.3
Farm and Ranch Foreman	13	1.5
Livestock	58	6.7
Crops	23	2.6
Unspecified	14	1.6
Combination Livestock and Crop	46	5.3
Artificial Inseminator	0	0.0
Herdsman	25	2.9
Milker	8	0.9
Sheep Herder	8	0.9
Apiarist	0	0.0
Cowboy	23	2.7
Truck Driver	5	0.6
Farm and Ranch Cook	5	0.6
General Household Assistant	14	1.6
Forestry	0	0.0
Horticulture	0	0.0
Total	866	100.0

* Rounded to nearest tenth

In 1974, 260 or 30% of Montana's agricultural producers predict that they will hire general farm, combination livestock and crop workers, while 251 or 29% plan to hire general farm, livestock workers. Forty-six or 5.3% of the producers predicted that they would hire farm and ranch foreman for livestock.

The predicted 1974 employees were primarily in the general farm worker job title, specifically combination livestock and crop and livestock categories.

Change in the seasonal agricultural employees to be hired by agricultural producers from 1971 to 1974 in Montana are presented in Table 23.

TABLE 23

CHANGES IN JOB TITLE OF SEASONAL AGRICULTURAL EMPLOYEES
1971-1974 AS INDICATED BY MONTANA AGRICULTURAL PRODUCERS

Job Titles	1971	1974	Number Change (+)(-)	Percent* Change
Gen. Farm Worker (Unspecified)	65	57	- 8	- 12.3
Comb. Livestock and Crop	526	461	-65	- 12.4
Livestock (General)	403	348	-55	- 13.6
Sheep	89	80	- 9	- 10.1
Beef	24	25	+ 1	+ 4.2
Poultry	0	0	0	0.0
Dairy	8	5	- 3	- 37.5
Hogs	3	0	- 3	-100.0
Field Crops (General)	41	35	- 6	- 14.6
Hay	519	448	-71	- 13.7
Grain	112	106	- 6	- 5.4
Sugar Beets	250	188	-62	- 24.8
Vegetables	0	0	0	0.0
Fruit Trees	70	70	0	0.0
Potatoes	238	216	-22	- 9.2
Farm Machinery Operator	378	327	-51	- 13.5
Agricultural Mechanic	14	16	+ 2	+ 14.3
Irrigation	138	134	- 4	- 2.9
Farm and Ranch Foreman	1	1	0	0.0
Livestock	2	2	0	0.0
Crops	5	5	0	0.0
Comb. Livestock and Crop	12	1	-11	- 91.7
Artificial Inseminator	15	12	- 3	- 20.0
Herdsman	9	9	0	0.0
Milker	5	4	- 1	- 20.1
Sheep Herder	6	5	- 1	- 16.7
Apiarist	1	1	0	0.0
Cowboy	13	14	+ 1	+ 7.7
Truck Driver	190	179	-11	- 5.8
Farm and Ranch Cook	5	3	- 2	- 40.0
Gen. Household Assistant	14	12	- 2	- 14.3
Forestry	2	1	- 1	- 50.0
Horticulture	12	12	0	0.0
Total	3170	2777	-393	

* Rounded to nearest tenth

Montana agricultural producers indicated they plan to hire 393 fewer seasonal employees in 1974 than they reported hiring in 1971. They plan to hire 71 or 13.7% fewer general farm workers, hay; 65 or 12.4% fewer general farm workers, combination livestock and crops; 51 or 13.5% fewer farm machinery operators; and 55 or 13.6% fewer general farm workers, livestock.

Changes in the number of full-time agricultural employees as indicated by Montana agricultural producers from 1971 to 1974 appear in Table 24.

TABLE 24

CHANGES IN FULL-TIME AGRICULTURAL EMPLOYEES
1971-1974 AS INDICATED BY MONTANA AGRICULTURAL PRODUCERS

Job Titles	1971	1974	Number Change (+)(-)	Percent* Change
General Farm Worker	12	13	+ 1	+ 8.3
Comb. Livestock and Crop	246	260	+14	+ 5.7
Livestock (General)	213	251	+38	+ 17.8
Sheep	4	4	0	0.0
Beef	14	14	0	0.0
Poultry	1	0	- 1	-100.0
Dairy	4	4	0	0.0
Hogs	3	4	+ 1	+ 33.3
Field Crops (General)	3	3	0	0.0
Hay	5	4	- 1	- 20.0
Grain	16	14	- 2	- 12.5
Sugar Beets	0	0	0	0.0
Vegetables	0	0	0	0.0
Fruit Trees	0	0	0	0.0
Potatoes	2	2	0	0.0
Farm Machinery Operator	20	26	+ 6	+ 30.0
Agricultural Mechanic	14	14	0	0.0
Irrigation	9	11	+ 2	+ 22.2
Farm and Ranch Foreman	15	13	- 2	- 13.3
Livestock	59	58	- 1	- 1.7
Crops	20	23	+ 3	+ 15.0
Unspecified	14	14	0	0.0
Combination Livestock & Crop	42	46	+ 4	+ 9.5
Artificial Inseminator	0	0	0	0.0
Herdsman	29	25	- 4	- 13.8
Milker	9	8	- 1	- 11.1
Sheep Herder	11	8	- 3	- 27.3
Apiarist	0	0	0	0.0
Cowboy	21	23	+ 2	+ 9.5
Truck Driver	6	5	- 1	- 16.7
Farm and Ranch Cook	5	5	0	0.0
General Household Assistant	14	14	0	0.0
Forestry	0	0	0	0.0
Horticulture	0	0	0	0.0
Total	811	866	+55	

* Rounded to nearest tenth

Figures in Table 24 show that agricultural producers plan to hire 55 additional full-time agricultural employees in 1974. It was predicted that 38 or 17.8% additional persons will be employed in the job title of general farm worker, livestock; 14 or 5.7% in the general farm worker, combination livestock and crops job titles; and 6 or 30% more persons in the job title of farm machinery operator.

Agricultural producers were asked to give the reasons why their agricultural employee work force would change between 1971 and 1974. They appear in Table 25.

TABLE 25

REASONS GIVEN BY MONTANA AGRICULTURAL PRODUCERS FOR JOB CHANGES FROM 1971-1974 FOR FULL-TIME EMPLOYEES

Reasons for Employee Change	Number	Percent*
Business Expansion	56	51.8
Normal Turnover	3	2.8
Retirement	5	4.6
Loss of Family Labor	11	10.2
Employee Not Trained	1	0.9
Cannot Compete With Welfare	0	0.0
Unsatisfactory Personnel	4	3.7
Salary Scale	0	0.0
Labor Laws	0	0.0
Geographic Isolation	2	1.9
Low Status of Job	0	0.0
Employee Unwilling to Work	0	0.0
Housing Inadequate	0	0.0
Inadequate Fringe Benefits	0	0.0
Employee Not Available	3	2.8
Additional Family Labor	9	8.3
Business Reduction	11	10.2
Selling or Sold Operation	2	1.9
Increased Mechanization	1	0.9
Total	108	100.0

* Rounded to nearest tenth

Producers gave nineteen different reasons 108 times why their number of full-time employees would change. The reason given by 56 or 51.8% of the agricultural producers was business expansion, followed by 11 or 10.2% of the reasons being loss of family labor and 11 or 10.2% indicating the reason for change was due to business reduction.

Average monthly salaries provided full-time agricultural employees by agricultural producers appear in Table 26.

TABLE 26

AVERAGE MONTHLY SALARIES PROVIDED FULL-TIME EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=582

Monthly Salaries (Dollars)	Number	Percent*
Less than 100	4	0.7
100 - 149	1	0.2
150 - 199	12	2.1
200 - 249	28	4.8
250 - 299	42	7.2
300 - 349	113	19.4
350 - 399	68	11.7
400 - 449	128	22.0
450 - 499	53	9.1
500 - 549	62	10.6
550 - 599	13	2.2
600 - 649	24	4.1
650 - 699	5	0.9
700 - 749	7	1.2
750 - 599	1	0.2
800 - 849	6	1.0
850 - 899	1	0.2
900 - 949	0	0.0
950 - 999	1	0.2
Over 1000	13	2.2
Total	582	100.0

* Rounded to nearest tenth

Of the 582 agricultural producers who responded, 128 or 22% indicated that they paid their full-time employees an average monthly salary of between 400 and 449 dollars per month; 113 or 19.4% paid between 300 - 349 dollars per month; 68 or 11.7% paid their employees between 350 and 399 dollars per month; 62 or 10.6% paid their employees between 500 - 549 dollars per month, while 53 or 9.1% paid their employees between 450 - 499 dollars per month.

Montana agricultural producers reported providing housing for full-time agricultural employees. The value which they assigned to housing appears in Table 27.

TABLE 27

VALUE MONTANA AGRICULTURAL PRODUCERS PLACED ON HOUSING PROVIDED TO FULL-TIME EMPLOYEES

N=443

Value of Housing (Dollars)	Number	Percent*
30 - 39	27	6.1
40 - 49	14	3.2
50 - 59	62	14.0
60 - 69	45	10.2
70 - 79	56	12.6
80 - 89	12	2.7
90 - 99	8	1.8
100 - 109	122	27.5
110 - 119	3	0.7
120 - 129	27	6.1
130 - 139	67	15.1
Total	443	100.0

* Rounded to nearest tenth

Housing provided full-time employees is an added remuneration to the employee and is often a convenience not only for him but for the employer. One hundred twenty-two or 27.5% of the agricultural producers assigned a value of between 100 - 109 dollars per month to housing; 67 or 15.1% indicated they valued housing between 130 - 139 dollars per month; 62 or 14% between 50 - 59 dollars per month; and 56 or 12.6% between 70 - 79 dollars per month.

Meals are provided to full-time agricultural employees by Montana's agricultural producers. The value which agricultural producers assigned to meals provided employees appears in Table 28.

TABLE 28

VALUE OF MEALS PROVIDED FULL-TIME AGRICULTURAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS

N=315

Value of Meals Per Month (Dollars)	Number	Percent*
Less than 19	5	1.6
20 - 29	7	2.2
30 - 39	16	5.1
40 - 49	11	3.5
50 - 59	27	8.6
60 - 69	21	6.7
70 - 79	18	5.7
80 - 89	4	1.3
90 - 99	64	20.3
Over 100	142	45.0
Total	315	100.0

* Rounded to nearest tenth

The largest single group of employers, 142 or 45%, indicated they valued meals provided at over 100 dollars per month; 64 or 20.3% indicated the value to be between 90 - 99 dollars per month.

Total average monthly value of salaries, meals and housing appear in Table 29. This is a compilation of information appearing in Tables 26, 27 and 28.

TABLE 29

TOTAL AVERAGE MONTHLY VALUE OF SALARIES, HOUSING AND MEALS PAID FULL-TIME AGRICULTURAL EMPLOYEES BY MONTANA AGRICULTURAL PRODUCERS (1971)

N=610

Total Average Monthly Value of Salaries, Meals and Housing (Dollars)	Number	Percent*
Less than 100	27	4.4
100 - 149	3	0.5
150 - 199	5	0.8
200 - 249	7	1.1
250 - 299	9	1.5
300 - 349	22	3.6
350 - 399	40	6.6
400 - 449	75	12.3
450 - 499	97	15.9
500 - 549	104	17.0
550 - 599	68	11.1
600 - 649	58	9.5
650 - 699	29	4.8
700 - 749	17	2.8
750 - 799	13	2.1
800 - 849	12	2.0
850 - 899	0	0.0
900 - 949	2	0.3
950 - 999	3	0.5
Over 1000	19	3.1
Total	610	99.9

* Rounded to nearest tenth

Table 29 shows that of the agricultural producers providing salaries, meals and housing, 104 or 17% reported providing employees with remuneration for these three items averaging between 500 - 549 dollars per month; 97 or 15.9%

averaged between 450 - 499 dollars per month; 68 or 11.1% between 550 - 599 dollars per month; and 58 or 9.5% averaged between 600 - 649 dollars per month.

Montana agricultural producers when indicating the number of full-time employees which they hired in 1971 also indicated the education that they required for each of the job titles. These data appear in Table 30.

TABLE 30

EDUCATIONAL REQUIREMENTS FOR FULL-TIME EMPLOYEES AS STATED BY MONTANA AGRICULTURAL PRODUCERS

N=552

Educational Requirements	Number	Percent*
No Requirement	339	61.4
8th Grade	39	7.1
High School Graduate	133	24.1
2 Year Vo-Tech.	25	4.5
College Degree	16	2.9
Total	552	100.0

* Rounded to nearest tenth

In total, 339 or 61.4% of the producers indicated that they had no educational requirement for the job titles which they reported; 133 or 24.1% indicated that a high school degree was required; 39 or 7.1% said that an eighth grade education was required; 25 or 4.5% required a two year vocational-technical graduate; while 16 or 2.9% felt a college degree would be required.

Full-time employees were needed by agricultural producers in Montana at the time this research was conducted. Job openings listed by job title appear in Table 31.

TABLE 31

CURRENT FULL-TIME JOB OPENINGS (1972) LISTED BY JOB TITLES

N=78

Job Titles	Number	Percent*
General Farm Worker	2	2.6
Combination Livestock and Crop	18	23.1
Livestock (General)	20	25.5
Sheep	2	2.6
Beef	1	1.3
Poultry	0	0.0
Dairy	0	0.0
Hogs	0	0.0
Field Crops (General)	2	2.6
Hay	3	3.7
Grain	0	0.0
Sugar Beets	0	0.0
Vegetables	0	0.0
Fruit Trees	0	0.0
Potatoes	0	0.0
Farm Machinery Operator	2	2.6
Agricultural Mechanic	2	2.6
Irrigation	2	2.6
Farm and Ranch Foreman	2	2.6
Livestock	6	7.6
Crops	2	2.6
Unspecified	0	0.0
Combination Livestock and Crops	6	7.6
Artificial Inseminator	0	0.0
Herdsman	1	1.3
Milker	2	2.6
Sheep Herder	1	1.3
Apiarist	0	0.0
Cowboy	1	1.3
Truck Driver	1	1.3
Farm and Ranch Cook	1	1.3
General Household Assistant	1	1.3
Forestry	0	0.0
Horticulture	0	0.0
Total	78	100.0

* Rounded to nearest tenth

A total of 78 job openings were listed by agricultural producers in the following job titles: 20 or 25.5% in general farm worker, livestock; 18 or 23.1% were general farm worker, combination livestock and crops; 6 or 7.6% were listed in farm and ranch foreman, combination livestock and crops; and 6 or 7.6% were listed as farm and ranch foreman, livestock.

Reasons given for previously mentioned current full-time job openings appear in Table 32.

TABLE 32

REASONS FOR CURRENT FULL-TIME JOB OPENINGS

N=65

Reasons For Job Openings	Number	Percent*
Business Expansion	17	26.1
Normal Turnover	5	7.7
Retirement	5	7.7
Loss of Family Labor	7	10.8
Employee Not Trained	3	4.6
Cannot Compete With Welfare	4	6.2
Unsatisfactory Personnel	10	15.4
Salary Scale	0	0.0
Labor Laws	0	0.0
Geographic Isolation	0	0.0
Low Status of Job	0	0.0
Employee Unwilling to Work	3	4.6
Housing Inadequate	0	0.0
Inadequate Fringe Benefits	0	0.0
Employee Not Available	11	16.9
Additional Family Labor	0	0.0
Business Reduction	0	0.0
Selling or Sold Operation	0	0.0
Increased Mechanization	0	0.0
Total	65	100.0

* Rounded to nearest tenth

Agricultural producers listed nineteen reasons 65 different times as to why current full-time job openings exist. Business expansion was indicated 17 or 26.1% of the time, employee not available was indicated 11 or 16.9%, while unsatisfactory personnel was given 10 or 15.4% of the time as the reason for existing job openings.

To assist program planners in establishing priorities regarding program development, it seemed desirable to determine which jobs have been difficult to fill. Data regarding positions difficult to fill appear in Table 33.

TABLE 33

JOB TITLES OF FULL-TIME POSITIONS DIFFICULT TO FILL

N=117

Job Titles	Number	Percent*
General Farm Worker	4	3.4
Combination Livestock and Crops	26	22.2
Livestock	23	19.7
Sheep	3	2.6
Beef	1	0.8
Poultry	0	0.0
Dairy	4	3.4
Hogs	1	0.8
Field Crops	0	0.0
Hay	1	0.8
Grain	0	0.0
Sugar Beets	1	0.8
Vegetables	0	0.0
Fruit Trees	0	0.0
Potatoes	0	0.0
Farm Machinery Operator	8	6.8
Agricultural Mechanic	3	2.6
Irrigator	7	6.0
Farm and Ranch Foreman	3	2.6
Livestock	9	7.7
Crops	0	0.0
Unspecified	0	0.0
Combination Livestock and Crops	5	4.3
Artificial Inseminator	0	0.0
Herdsman	3	2.6
Milker	2	1.7
Sheep Herder	5	4.3
Apiarist	0	0.0
Cowboy	3	2.6
Truck Driver	1	0.8
Farm and Ranch Cook	3	2.6
General Household Assistant	1	0.8
Forestry	0	0.0
Horticulture	0	0.0
Total	117	99.9

* Rounded to nearest tenth

One hundred seventeen difficult to fill job titles were reported of which 26 or 22.2% were in the job title general farm worker, combination livestock and crops; 23 or 19.7% general farm worker, livestock; 9 or 7.7% were in the job title farm and ranch foreman, livestock; and 8 or 6.8% were in the job title farm machinery operator.

Information regarding difficulties in filling job positions by job titles for seasonal employees appears in Table 34.

TABLE 34

JOB TITLES OF SEASONAL POSITIONS DIFFICULT TO FILL

N=358

Job Title	Number	Percent*
General Farm Worker	10	2.8
Combination Livestock and Crop	68	19.0
Livestock (General)	23	6.4
Sheep	13	3.6
Beef	4	1.1
Poultry	0	0.0
Dairy	0	0.0
Hogs	1	0.3
Field Crops (General)	16	4.5
Hay	38	10.6
Grain	16	4.5
Sugar Beets	0	0.0
Vegetables	0	0.0
Fruit Trees	0	0.0
Potatoes	4	1.1
Farm Machinery Operator	84	23.5
Agricultural Mechanic	4	1.1
Irrigation	33	9.2
Farm and Ranch Foreman	0	0.0
Livestock	0	0.0
Crops	0	0.0
Unspecified	0	0.0
Combination Livestock and Crop	0	0.0
Artificial Inseminator	1	0.3
Herdsman	3	0.8
Milker	3	0.8
Sheep Herder	4	1.1
Apiarist	0	0.0
Cowboy	2	0.6
Truck Driver	27	7.5
Farm and Ranch Cook	1	0.3
General Household Assistant	3	0.8
Forestry	0	0.0
Horticulture	0	0.0
Total	358	99.9

* Rounded to nearest tenth

Three hundred fifty-eight seasonal jobs were reported as difficult to fill by Montana agricultural producers. Eighty-four or 23.5% of the job titles were classified as farm machinery operators; 68 or 19% were general farm workers, combination livestock and crops; 38 or 10.6% were general farm workers, hay; 33 or 9.2% were irrigators; 27 or 7.5% were truck drivers; and 23 or 6.4% were general farm workers, livestock.

Ultimately, the program planner will need to project the sampled seasonal employment data to the total population of Montana agricultural producers hiring employees in order to determine manpower needed. Thus, numbers of seasonal employees derived from the sample population were projected using a straight ratio proportion method to the total population of Montana agricultural producers. These data appear in Table 35.

TABLE 35

SEASONAL EMPLOYEES DATA PROJECTED TO TOTAL POPULATION

Job Titles	Projected 1971	Projected 1974
General Farm Worker	436	382
Comb. Livestock and Crop	3528	3092
Livestock (General)	2703	2334
Sheep	597	537
Beef	161	168
Poultry	0	0
Dairy	54	34
Hogs	20	0
Field Crops (General)	275	235
Hay	3481	3005
Grain	751	711
Sugar Beets	1677	1261
Vegetables	0	0
Fruit Trees	470	470
Potatoes	1596	1449
Farm Machinery Operator	2536	2193
Agricultural Mechanic	94	107
Irrigation	926	899
Farm and Ranch Foreman	7	7
Livestock	13	13
Crops	34	34
Combination Livestock and Crop	81	7
Artificial Inseminator	101	81
Herdsman	60	60
Milker	34	27
Sheep Herder	40	34
Apiarist	7	7
Cowboy	87	94
Truck Driver	1275	1201
Farm and Ranch Cook	34	20
General Household Assistant	94	81
Forestry	13	7
Horticulture	81	81
Total	21,266	18,631
Total Decrease		2635

Sampled data were discussed on pages 29 and 31, thus, no additional comments will be made regarding the projections.

To facilitate the program planning process, the sampled data regarding full-time employees were projected to the total population of 10,028 Montana agricultural producers who hired full-time agricultural employees in 1971 as reported by the Internal Revenue Service. These data appear in Table 36.

TABLE 36

FULL-TIME EMPLOYEES PROJECTED TO TOTAL POPULATION
1971-1974

Job Titles	Projected 1971	Projected 1974
General Farm Worker	81	87
Combination Livestock and Crop	1650	1744
Livestock (General)	1429	1684
Sheep	27	27
Beef	94	94
Poultry	7	0
Dairy	27	27
Hogs	20	27
Field Crops (General)	20	20
Hay	34	27
Grain	107	94
Sugar Beets	0	0
Vegetables	0	0
Fruit Trees	0	0
Potatoes	13	13
Farm Machinery Operator	134	174
Agricultural Mechanic	94	94
Irrigation	60	74
Farm and Ranch Foreman	101	87
Livestock	396	389
Crops	134	154
Unspecified	94	94
Combination Livestock and Crop	282	309
Artificial Inseminator	0	0
Herdsman	195	168
Milker	60	54
Sheep Herder	74	54
Apiarist	0	0
Cowboy	141	154
Truck Driver	40	34
Farm and Ranch Cook	34	34
General Household Assistant	94	0
Forestry	0	0
Horticulture	0	0
Total	5442	5717
Total Increase		275

Sampled data were discussed on pages 41 and 43, thus, additional comments regarding projections will not be made.

Producers were asked to indicate reasons for the difficulties they encountered in the past few years in filling full-time job titles in which they currently had job openings. These reasons appear in Table 37.

TABLE 37

REASONS FOR DIFFICULTY IN FILLING
FULL-TIME JOB POSITIONS LAST FEW YEARS

N=113

Reasons for Hiring Difficulty	Number	Percent*
Business Expansion	1	0.9
Normal Turnover	0	0.0
Retirement	0	0.0
Loss of Family Labor	0	0.0
Employee Not Trained	17	15.0
Cannot Compete With Welfare	14	12.4
Unsatisfactory Personnel	43	38.0
Salary Scale	6	5.3
Labor Laws	0	0.0
Geographic Isolation	0	0.0
Low Status of Job	3	2.7
Employee Unwilling to Work	12	10.6
Housing Inadequate	1	0.9
Inadequate Fringe Benefits	0	0.0
Employee Not Available	16	14.2
Additional Family Labor	0	0.0
Business Reduction	0	0.0
Selling or Sold Operation	0	0.0
Increased Mechanization	0	0.0
Total	113	100.0

* Rounded to nearest tenth

Agricultural producers gave 19 different reasons, a total of 113 times, as difficulties in filling full-time job titles. Forty-three or 38% of

the respondents gave unsatisfactory personnel as a reason; 17 or 15% cited employee not trained; 16 or 14.2% said employee was not available; 14 or 12.4% listed inability to compete with welfare; and 12 or 10.6% indicated as a reason that the employee was unwilling to work.

To determine the beginning salary level which Montana agricultural producers were willing to pay full-time employees for which they had listed job openings, producers were asked to indicate this figure, including room and board. These data appear in Table 38.

TABLE 38

BEGINNING MONTHLY SALARIES (INCLUDING ROOM AND BOARD)
FOR FULL-TIME JOB OPENINGS

N=73

Salary (Including room and board)	Number	Percent*
Less than 100	3	4.1
100 - 149	0	0.0
150 - 199	0	0.0
200 - 249	1	1.4
250 - 299	2	2.7
300 - 349	12	16.4
350 - 399	13	17.8
400 - 449	9	12.3
450 - 499	7	9.6
500 - 549	13	17.8
550 - 599	4	5.5
600 - 649	3	4.1
650 - 699	1	1.4
700 - 749	0	0.0
750 - 799	1	1.4
800 - 849	0	0.0
850 - 899	1	1.4
900 - 949	0	0.0
950 - 999	1	1.4
Over 1000	2	2.7
Total	73	100.0

* Rounded to nearest tenth

Seventy-three producers reported that they would be willing to pay beginning salaries, including board and room, ranging from less than 100 dollars to over 1000 dollars per month. Thirteen or 17.8% indicated that they would pay salaries of between 500 - 549 dollars per month, while this same number and percent indicated their willingness to pay between 350 - 399 dollars per month. Twelve or 16.4% reported that they would pay between 300 - 349 dollars, 9 or 12.3% would pay between 400 - 449 and 7 or 9.6% indicated their willingness to pay between 450 - 499 dollars per month as a beginning salary, including board and room, for full-time employees.

Montana's agricultural producers encountered difficulties in hiring seasonal employees. The frequency of these difficulties are presented in Table 39.

TABLE 39

REASONS GIVEN FOR SEASONAL JOB OPENINGS DIFFICULT TO FILL

Reasons For Difficulty	Number	Percent*
Business Expansion	0	0.0
Normal Turnover	0	0.0
Retirement	1	0.3
Loss of Family Labor	0	0.0
Employee Not Trained	63	17.6
Cannot Compete With Welfare	40	11.2
Unsatisfactory Personnel	52	14.5
Salary Scale	11	3.1
Labor Laws	2	0.6
Geographic Isolation	5	1.4
Low Status of Job	14	3.9
Employee Unwilling to Work	46	12.8
Housing Inadequate	0	0.0
Inadequate Fringe Benefits	0	0.0
Employee Not Available	124	34.6
Additional Family Labor	0	0.0
Business Reduction	0	0.0
Selling or Sold Operation	0	0.0
Increased Mechanization	0	0.0
Total	358	100.0

* Rounded to nearest tenth

Nineteen reasons were given 358 times for difficulties in filling seasonal job openings; 124 or 34.6% producers listed as reasons employees not available to work; 63 or 17.6% indicated that the employee was not trained; 52 or 14.5% listed unsatisfactory personnel; 46 or 12.8% indicated that the employee was unwilling to work; while 40 or 11.2% gave their reason as inability to compete with welfare.

III

MAJOR FINDINGS

1. Montana agricultural producers have an immediate need for seasonal and full-time agricultural employees who would fit the description of a general farm worker. To a limited degree employees within specialized job title categories were needed.

2. Agricultural producers in Montana predict they will employ more full-time agricultural employees in 1974 than were employed in 1971 but they will employ fewer seasonal employees in 1974 than in 1971.

3. Business expansion, loss of family labor, and increased mechanization were the reasons most often given for the change in the number of full-time and seasonal employees from 1971-1974.

In the case of seasonal employees, a reduction of 393 employees was noted. This would imply that increased mechanization will reduce the need for seasonal labor.

4. Sixty-nine and six-tenths percent of the Montana agricultural producers hiring seasonal and 61.4% of those hiring full-time employees stated that they have no educational level requirement for agricultural employees they hire. This would imply that the level of education was not considered to be very important, provided an employee had appropriate knowledge and skills.

5. Fifty-three and one-tenth percent of the agricultural producers who hired seasonal employees provided total monthly remuneration including salaries, meals, housing, etc., ranging from 400 to 649 dollars per month, whereas, 51.8% of the producers provided remuneration ranging between 350 and 549 dollars per month for full-time employees.

6. Ninety and seven-tenths percent of the agricultural producers who indicated openings for seasonal employees and 90.3% of those who indicated openings for full-time employees gave reasons for these vacancies as follows: (1) employees not available, (2) employees not specifically trained, (3) unsatisfactory personnel, (4) cannot compete with welfare, and (5) employee unwilling to work.

7. Seventy-three and nine-tenths percent of the agricultural producers listing full-time job openings indicated they would pay these employees an average monthly salary (including meals and housing) of between 300 and 549 dollars per month.

IV

RECOMMENDATIONS

Based on the findings of the study, the researcher recommends that Phase 11-B of the producers survey to determine knowledge, skills and attitudes needed by Montana agricultural producers be initiated. The justification for continuing the study is that there are jobs present and predicted in agricultural production in Montana. The data indicate that the job market for full-time employees will be changing rather than stable. Concurrently with the initiation of Phase 11-B, a variety of statistical techniques should be applied to the several variables associated with agricultural manpower to determine existing inner-relationships. It is hypothesized by the researcher that a number of important implications will result. Phase 11-B is an essential pursuant to the design of curriculums and the institution of agricultural education programs to meet manpower needs.

V

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